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Communication study

Turkish migrant GP patients' expression of emotional cues and concerns in encounters with and without informal interpreters

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ABSTRACT

Objective: The aim of this study was to compare patients' expressions of emotional cues and concerns, and GPs' responses during consultations with and without informal interpreters. Furthermore, informal interpreters' expression of emotional cues and concerns and their responses were examined too.
Methods: Twenty-two audiotaped medical encounters with Turkish migrant patients, eleven with and eleven without an informal interpreter, were coded using the Verona Coding Definitions of Emotional Sequences (VR-CoDES) and the Verona Codes for Provider Responses (VR-CoDES-P).
Results: In encounters with informal interpreters, patients expressed less emotional concerns than in encounters without informal interpreters. Only half of all patients' cues is being translated by the informal interpreter to the GP. Furthermore, 20% of all cues in encounters with informal interpreters is being expressed by the interpreter, independent of patients' expression of emotions.
Conclusion: The presence of an informal interpreter decreases the amount of patients' expression of emotional concerns and cues. Furthermore, a substantial amount of cues is being expressed by the informal interpreter, corroborating the often-made observation that they are active participants in triadic medical encounters.
Practice implications: GPs should be trained in communication strategies that enable elicitation of migrant patients' emotions, in particular in encounters with informal interpreters.

1. Introduction

A substantial amount of medical encounters takes place between healthcare providers and patients of different cultural, linguistic and ethnic background. In the Netherlands, first and second-generation migrants make up 21% of the total population (about 3.5 million citizens), over half of whom are from so-called non-Western countries [1]. As it has been estimated that around fifty percent of non-Western migrants has difficulty communicating in Dutch with their health care provider [2], the fundamental need of these migrant patients to both understand and feel understood [3] is at severe risk of not being adequately fulfilled. Previous research has indeed shown that medical consultations with migrant patients are more frequently characterized by poor communication and misunderstandings than those with patients who share their physicians' linguistic (and cultural) background (e.g. [4–10]). As a consequence, they report lower levels of understanding and recall, adhere less to prescribed treatment regiments, and are less satisfied with received care as compared to patients belonging to the dominant culture [4,11–13].

The quality of affective communication seems to be particularly challenged in consultations with migrant patients [14]. Several studies have revealed that both physicians and migrant patients behave less affective toward each other; they conduct less social talk, show less empathy and are less emotionally engaged with each other than physicians and patients belonging to the dominant culture [5,6,15,16]. The less affective relationship between physicians and migrant patients not only hinders the establishment of rapport, but also decreases the chance of reaching a common understanding of the patient's health complaints and hence, delivering adequate treatment.

One way to tackle (affective) communication barriers between migrant patients with insufficient language proficiency and their healthcare providers is to make use of interpreters. Although professional medical interpreting and translation services have been organized by the Dutch government since 1976, due to

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budget cuts this free provision has ceased to exist from 2012. Hence, the use of informal interpreters such as family members and friends, which is already common practice in general practice [2], is likely to increase even more. Despite documented negative effects of informal interpreting on the accuracy and quality of communication (e.g. [17–19]), a few studies have pointed to several advantages of using informal interpreters. For instance, migrant patients might have increased willingness to talk about sensitive and emotional issues in the presence of an informal interpreter as compared to professional ones, because they trust them more [20,21]. Informal interpreters themselves have indeed reported to be able to adequately convey the patient's emotions to healthcare providers, because they have firsthand knowledge of their relatives' medical problems and the contexts in which they occur (e.g. [22]).

As there is at present a lack of knowledge about whether informal interpreters are indeed capable of bridging the often-observed affective communication barrier between migrant patients' and their healthcare providers, this exploratory study compared consultations between migrant patients with and without informal interpreters in primary care. As patients' and physicians' expressions of and responses to emotions are a core element of many medical encounters and have been associated with positive health outcomes [23], the main purpose of this observational study was to compare the verbal expression of patients' emotions between encounters with and without informal interpreters, as well as GPs' responses to these expressions, by making use of the Verona Coding Definitions of Emotional Sequences (VR-CoDES), a consensus based coding system to identify patients' expressions of emotional distress and healthcare providers' responses to their expressions [24,25]. It has been developed from medical consultations and successfully applied to diverse health contexts, among which hospital settings, dental settings and primary care. We also investigated informal interpreters' expressions of emotions and their responses to patients' emotional expressions. The focus in this study was on migrant patients from Turkish origin, because they are the largest ethnic minority group in the Netherlands and visit their GP significantly more often compared to the Dutch population [26].

2. Method

2.1. Sample and procedure

Analyses were based on 22 transcripts of audiotapes derived from a larger database that included 120 audio recorded interactions with eleven GPs (seven men, four women) from six GP practices in three multicultural cities in the Netherlands (see [27] for a detailed description of the sample). Inclusion criteria were that patients had an appointment with the GP for themselves and were able to read in Dutch or Turkish or were accompanied by someone who could read in Dutch or Turkish. After obtaining informed consent by a research assistant in the waiting room, all patients filled out a pre-consultation questionnaire, which was available in Dutch and Turkish.

For the purpose of the present study, all available encounters from our database that involved Turkish patients accompanied by an informal interpreter (i.e. family members or acquaintances the patient took along to the consultation to help them communicating with the GP) were included ($n = 11$), allowing for a culturally homogenous group. A comparison sample ($n = 11$) of Turkish patients visiting the GP alone was established by matching the groups on age and seriousness of the health problem, because differences in the expression of emotions could be due to these factors [28]. Matching was done by securing that the two groups did not differ significantly on these variables. The Turkish fragments in the transcripts were written in Turkish and translated into Dutch by a Turkish bilingual research assistant. The ethical committee of the Amsterdam School for Communication Research has approved the study.

2.2. Measures

2.2.1. Patients' questionnaire

Ethnic background of the patients was based on the ethnicity definition of the Dutch Central Bureau of Statistics; respondents born in Turkey and/or having at least one parent born in Turkey were categorized as Turkish. Other variables measured were gender, age, educational level (1 = elementary school, 5 = higher vocational level/university), frequency of GP visits during the last year, perceived general health and worries about the current health complaint. The two latter variables were both assessed with a single item on a 5-point Likert scale, the first ranging from 1 ('excellent perceived general health') to 5 ('bad perceived general health'), the second ranging from 1 ('not worried at all') to 5 ('extremely worried').

2.2.2. GPs post-consultation questionnaire

After each consultation the GPs filled out a short questionnaire, assessing their perception of the seriousness of the patient's health problem, the extent to which the GP knows the patient, and the extent to which psychosocial problems during the consultation were present. All variables were measured with a single item on a 5-point Likert scale, ranging from 1 (''not at all'') to 5 (''very'').

2.2.3. Communication behavior

2.2.3.1. Patients' communication behavior and GPs' responses. Patients' expressions of emotional distress are coded as ''cues'' or ''concerns''. Concerns are clear and unambiguous expressions of unpleasant emotions that are explicitly verbalized, while cues are verbal or nonverbal hints suggesting an underlying unpleasant emotion that lacks clarity (VR-CoDES [24]). Cues are divided in seven subcategories in the protocol: *cue a* refers to vague or unspecified words to describe emotions, *cue b* refers to verbal hints to hidden concerns, *cue c* refers to words or phrases which emphasize physiological or cognitive correlates of unpleasant emotional states, *cue d* refers to neutral expressions that mention issues of potential emotional importance which stand out from the narrative background, *cue e* refers to a patient elicited repetition of a previous neutral expression, *cue f* refers to a nonverbal expression of emotion, and *cue g* refers to a clear expression of an unpleasant emotion which occurred in the past. In this study, the nonverbal *cue f* is left out of the coding process because of the use of audiotapes. Table 1 provides examples of cues/concern from our transcripts.

Table 1
Examples of cues and concern.

Cues/concern	Examples from transcripts
Concern	*"I am really scared, if it gets worse, that is big problem for me."* (patient)
Cue a	*"But this time, she is not satisfied, the pain has not gotten less."* (interpreter)
Cue b	*".once totally floored of it [pain]. That's not normal, isn't it?"* (patient)
Cue c	*"Normally, she never cries, but this morning, she even had tears in her eyes."* (interpreter)
Cue d	*"I really have a problem with the wife; arguments, fighting."* (patient)
Cue e	*"Can she describe painkillers for my knees?"* (repeated question of patient)
Cue g	*"I have been really angry, you understand?"* (patient)

GPs' responses are coded according to five main categories, non-explicit reducing space (NR), non-explicit providing space (NP), explicit reducing space (ER), explicit providing space content (EPC)) and explicit providing space affect (EPA) (VR-CoDES-P [25]). NR responses are defined as any response which does not explicitly mention either the content or the emotion of the cue or concern and reduces space for further disclosure; NP responses are defined as any response which does not refer explicitly to the content or the emotion of the cue or concern and provides space for further disclosure; ER responses are defined as any response which refers explicitly to the content or emotion of the cue or concern and reduces space for further disclosure; EPC responses are defined as any response which refers explicitly to the content of the cue or concern and provides space for further disclosure; EPA responses are defined as any response which refers explicitly to the affect of the cue or concern and provide space for further disclosure.

2.2.3.2. Interpreters' communication behavior. Interpreters' verbal expression of emotions was coded using the VR-CoDES as explained above. That is, all interpreters' utterances in which a cue or concern referring to their perceptions of patients' emotional distress was present, but were uttered independent of the patients' communicative behavior (i.e. were not a translation of a patient cue or concern), were coded in the same manner as patients' cues and concerns. In addition, interpreters' responses to patients' cues and concerns were coded with three main categories: (1) translation, referring to the interpreter correctly or incorrectly translating the utterance in which the patient's cues and concerns occurred (2) reaction, referring to the interpreter reacting to the patients' cue or concern without translating the cue/concern to the GP, and (3) ignoring, referring to the interpreter neither translating nor reacting to the patients' cues and concerns. The category 'reaction' was coded with the VR-CoDES-P as described above. The category 'translation' was further divided in two subcategories: (1) correct translation of patient's cues or concern, and (2) translation revision. The category 'translation revision' was further divided into three subcategories: (a) downplaying, referring to a revision in the translation in such a way that the intensity of the patient's cue or concern is decreased; (b) exaggerating, which refers to a revision in translation in such a way that the intensity of the patient's cue or concern is increased; (c) omission, which refers to a translation in such a way that the patient's cue or concern is left out of it. These codes were partly based on previous literature on medical interpreting (e.g. [19]) and partly established after close reading of the transcripts and are mutually exclusive.

2.2.4. Consultation length

Consultation length was assessed in minutes and amount of words. Amount of words was assessed overall and separately for each of the three parties involved (GP, patient and interpreter). Based on Aranguri et al. [19], word counts were used as an estimate of speaking time by calculating the relative percentages of words per consultation for GP, patient and interpreter.

2.3. Reliability of codings

All observations were coded from audiotape and transcript by the first author (BS), who was trained on the VR-CoDES and VR-CoDES-P using the training material available on the EACH website. The second author (SS) first coded three transcripts, which were compared with the codings of BS to identify specific challenges in applying the coding system. Then, SS coded another three consultations to establish inter-rater reliability, which was satisfactory (Cohen's kappa = 0.63).

2.4. Analyses

Descriptives are given for patient characteristics, cues and concerns, consultation length, GPs' responses and informal interpreters' responses. Differences between the two groups in background characteristics, consultation length, cues and concerns, and responses were measured using chi-square tests or independent samples *t*-tests. Due to the small sample size, multivariate analyses were not possible. All tests were two-tailed and the *p* value was set at the 5% level.

3. Results

3.1. Participants

In eleven consultations an informal interpreter was present (five husbands, three sons, one daughter, one daughter-in-law and one female neighbor). As can be seen from Table 2, there were no differences between consultations with and without an informal interpreter in patients' age, gender of GP, frequency of GP visits during the last year, self-reported general health and self-reported worries about current health complaint. Furthermore, there were no differences between the two samples in the extent to which the patient is known by the GP, seriousness of the health complaint and the extent to which psychosocial problems are present, as assessed by the GPs. Patients without an interpreter were more often male ($x^2 = 5.3$; $p < .05$) and were higher educated than patients with an interpreter ($t = 2.5$; $p < .05$).

3.2. Consultation length

Total consultation length was on average two minutes longer in encounters with an interpreter than in those without an interpreter (resp. M = 11.3, Sd = 5.5; M = 9.1, Sd = 5.8; ns). While it is to be expected that in consultations with interpreters around fifty percent of the time the interpreter is speaking, because he/she has to translate both the GPs' and the patients' words, this was not

Table 2
Patient sample characteristics.

	Patients with interpreter ($n = 11$) M (Sd)	Patients without interpreter ($n = 11$) M (Sd)
Age	45.0 (11.8)	51.7 (15.3)
Educational level*	1.3 (0.8)	2.6 (1.3)
Frequency of GP visits last year	3.4 (0.8)	3.3 (0.5)
General health	4.0 (0.8)	3.4 (0.8)
Worries current health complaint	2.6 (1.1)	2.4 (0.8)
Patient known by GP	2.1 (1.0)	3.1 (1.1)
Seriousness health complaint	1.7 (0.8)	1.7 (0.8)
Psychosocial problems present	1.3 (0.4)	1.1 (0.3)
Gender patient* (%)	Male: 9%	Male: 55%
Gender GP (%)	Male: 27%	Male: 36%

* $p < 0.05$.

the case. Interpreters spoke 29.5%, patients spoke 14.3% and GPs spoke 56.2% of the time. There was no difference in GPs' speaking time between encounters with and without interpreters. However, patients spoke significantly less in consultations with an interpreter than in consultations without an interpreter (14.3% versus 41.0%, $p < 0.001$).

3.3. Patients' and interpreters' cues and concerns

Cues occurred in 86% ($n = 19$) of all consultations and concerns in 23% ($n = 5$) of all consultations. As can be seen from Table 3, the mean number of patient cues per consultation was 7.3 (range 0–33), and the mean number of patient concerns was 0.4 (range 0–3) in the total sample. The mean number of patient cues was higher in consultations without interpreters (M = 8.2) than in consultations with interpreters (M = 6.5), but the difference was not significant. There was a significant difference between consultations with and without interpreters in amount of concerns ($t = 2.3$; $p < 0.05$). All patient concerns were expressed in consultations without interpreters; no concerns were expressed in consultations with interpreters.

The most prevalent patient cue was 'cue b' (*verbal hints to hidden concerns*), which took up 47.2% of total amount of cues. These cues most often emphasized uncertainties about physical symptoms: "*... once totally floored because of it* [pain]. *That's not normal, isn't it?*" The relative high prevalence of 'cue d' (*a neutral expression that stands out from the narrative and mentions issues of potential emotional importance* (*repetition of a previously neutral expression*), which took up 15.5% of all cues, most often concerned expressions about stressful life circumstances, such as problems at work and family problems: *"I really have a problem with the wife; arguments, fighting..."* 'Cue a' (*unspecified/vague words to describe emotions*) was also expressed in 15.5% of all cues, followed by 'cue e' (11.2%; *repetition of previous neutral expression*), 'cue c' (9.3%; *words emphasizing physiological or cognitive correlates of unpleasant emotions*), and 'cue g' (1.2%; *clear expression of an unpleasant emotion which is in the past*).

In consultations with informal interpreters, the mean number of interpreters' cues was 1.6 (Sd = 2.2; range 0–6). In total, 20% of all cues in consultations with informal interpreters was expressed by the informal interpreter, independent of the patients' communicative behavior, and concerned informal interpreters' perceptions of the patient's emotional distress. As was the case with patient cues, the most prevalent interpreter cue was 'cue b' (55.6%). These cues most often emphasized informal interpreters' worries about the patient's health or about treatment: *".this time, she [patient] is not satisfied with it [chronic pain treatment]; the pain has not become less."* 'Cue a' was expressed in 27.7% of all cues, followed by 'cue e' (11.1%) and 'cue c' (5.5%). Informal interpreters did not express any 'cue d' or any concerns.

3.4. GPs' responses

GPs' responses to patients' and interpreters' cues and concerns are shown in Table 4. Note that the number of GPs' responses is lower than the number of patients' and interpreters' cues and concerns, because not all cues were translated by the interpreters (see Section 3.5). GPs responded more often by providing space than by reducing space (resp. M = 5.1 and M = 1.8; $t = 2.0$, $p = .06$). They also more often used non-explicit responses than explicit responses (resp. M = 5.0 and M = 2.0; $t = 2.0$, $p = .06$). The non-explicit providing space response most often used was back-channeling, most often expressed as the minimal response *'Hmm'*, which took up 65.1% of all non-explicit providing space responses. The second most uttered non-explicit providing space response by GPs was active invitation (19.8%), which refers to seeking further disclosure or information from the patient about the cue or concern, without making explicit reference to it. As can be seen from Table 4, GPs respond to patients in a non-explicit providing space manner three times more often in consultations without an interpreter compared to consultations with an interpreter (resp. M = 6.0 and M = 1.8; ns).

3.5. Interpreters' responses

As can be seen from Fig. 1 less than half of all patients' cues is being translated (46.3%) to the GP, of which only 15.8% was a correct translation. In all other translations revisions are being made by the interpreter, most often by downplaying the intensity of the cue (50%): *Pt: "Belim de agriyor her gun. Duramiyorum agridan." [Translation: "My back hurts every day. The pain is unbearable."], Int: "Yes, her back troubles her too because of that."* In 18.8% of revisions, the interpreter exaggerates the intensity of the cue: *Pt: "Cok agriyor." [Translation: It hurts a lot."] Int: "This hurts a lot more now. This big, big, I have never seen that before."*, and in 31.3% of revised translations, the cue is omitted from the translation: *Pt: "Haa ya iste o nefesi alamiyorum. Alirken nefesim daraliyor nefesim boyle, yaparken zorlaniyorum." [Translation: Oohh yes, that air I cannot breathe. When I breathe, I suffocate when I do this, then I find that tiring."] Int: "Very difficult breathing, that."*

About a quarter of all patient cues is being ignored by the informal interpreters (24.4%), that is, they neither translated the cue to the GP nor reacted to the patient's cue themselves. Informal interpreters did react to patient cues, without translating it to the GP, in 29.3% of all cases. 75% of interpreters' reactions concerned a non-explicit response, and 66.7% of interpreters' responses concerned a reducing space response. The non-explicit reducing space response interpreters most often use in their reaction to the patient is generic information advice (33.3%). For example, in one consultation the patient worries about her ostoeclasis (dissolution of bone tissue), but instead of translating the patient's worries to the GP, the interpreter, her son, reacts to the patient by giving information about medical treatment:

> *Pt: "Onu diyorum ya, kemik o zaman daha kotu olur ilerde. Turkiyeye gittigim doktor da oyle dedi daha kotu olur dikkat et dedi hani yuruyus yap iste boyle kendi kendine boyle sey." [Translation: "That's what I mean, then the bone will get even worse in the future. The doctor in Turkey has said that as well, that it will become worse. You have to take care, he said, you have to walk and those kind of things."]*

Table 3
Mean number of cues and concerns in consultations with and without interpreters.

Cues and concerns	Total ($n = 22$) M (Sd)	Consultations with interpreters ($n = 11$) M (Sd)	Consultations without interpreters ($n = 11$) M (Sd)
Cues patient	7.3 (8.5)	6.5 (5.1)	8.2 (11.1)
Concerns patient*	0.4 (0.8)	0 (0)	0.7 (1.0)
Total amount Cues/concerns patient	7.7 (8.9)	6.5 (5.1)	8.9 (11.6)
Cues interpreter	NA	1.6 (2.2)	NA
Total amount Cues/concern	7.7 (8.9)	8.1 (6.8)	8.9 (11.6)

* $p < 0.05$.

Table 4
Mean number of GPs' responses in consultations with and without interpreters.

GP responses	Total ($n = 22$) M (Sd)	Consultations with interpreters ($n = 11$) M (Sd)	Consultations without interpreters ($n = 11$) M (Sd)
Non-explicit reducing space	1.0 (1.6)	1.3 (2.1)	0.8 (1.2)
Non-explicit providing space	3.9 (7.0)	1.8 (1.7)	6.0 (9.6)
Explicit reducing space	0.8 (1.4)	0.9 (1.8)	0.6 (1.0)
Explicit providing space: content	0.9 (1.0)	0.9 (0.9)	0.8 (1.1)
Explicit providing space: affect	0.4 (0.8)	0.09 (0.3)	0.6 (1.0)

Int: "Simdi sey buldular ona ya sey buldular oraya sunni sey koyuyorlar." [Translation: "They now have developed so and so for that, they put something artificial there."]

4. Discussion and conclusion

4.1. Discussion

In medical encounters between GPs and migrant patients many challenges with establishing an adequate communication process have been reported, in particular when it comes to affective talk. Insufficient language proficiency of migrant patients has often been cited as a main barrier [14] and interpreters are thus seen as a viable solution that may help bridge this communication gap. According to some previous studies, informal interpreters, such as family members, are particularly suitable to enhance the establishment of an affective relationship between migrant patients and their healthcare providers, because they are known and trusted by the patient, thereby making it easier for them to talk about their emotions [2]. In addition, informal interpreters themselves have reported to be able to convey the patients' emotions to the healthcare provider, because they have firsthand contextual knowledge of the worries and health complaints of their family member [22]. To the best of our knowledge, this study is the first that aimed to investigate whether these self-reported perspectives can be backed up by observational data.

In contrast to the findings from the studies mentioned above, results from this study indicate that the presence of an informal interpreter does not enhance patients' expression of emotional cues and concerns in general practice. In encounters with interpreters, patients expressed somewhat less cues than patients visiting the GP alone and patients who were accompanied by an informal interpreter expressed no concerns at all. Although the mean difference in amount of concerns between the two groups is relatively small (0.7 versus 0), the mean number of concerns in the patient group without informal interpreters corresponds to the number of concerns found in previous research (e.g. [29,30]). The fact that no concerns were being expressed at all by patients in the presence of an informal interpreter is thus remarkable, and in line with findings from a study by Rosenberg and colleagues [31], who found that migrant patients discussed fewer emotions in the presence of a family interpreter than in the presence of a professional one. Possibly, patients might be reluctant to communicate their worries and concerns because they do not want to burden their family members, as they may already feel guilty for depending upon their help in the first place.

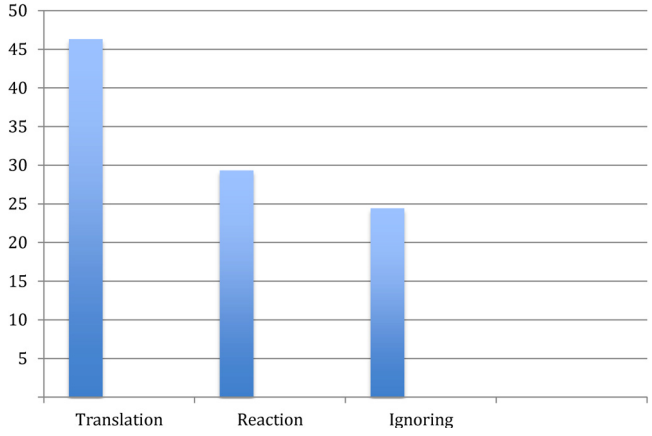

Fig. 1. Interpreters' responses to patients' cues (%).

Another concern is the finding that only half of patients' cues is being translated by the interpreter, and moreover, in a substantial amount of translations the cue is being omitted. A high percentage of non-translation of emotional cues by interpreters to healthcare practitioners has been reported before, even among professional interpreters [32], and corresponds to the results of previous observational research showing that interpreters frequently omit information in their translations. This lack of (accurate) translation has been identified by healthcare practitioners as a major hindrance to communicating with migrant patients and informal interpreters [33], and implies that they have to use active communication strategies to elicit migrant patients' emotions. The fact that the GPs in this study most frequently respond to patients' cues with providing space, suggests that they might have some awareness of this problem and attempt, albeit in a predominantly non-explicit way, to elicit their patients' worries and distress. However, GPs respond substantially less with providing space in encounters with informal interpreters. Although it could be the case that GPs feel more pressured for time in encounters with informal interpreters, and therefore, are focused more on collecting medical information than on exploring patients' emotions, earlier research has shown that consultation length is actually shorter when healthcare providers adequately respond to their patients' expressions of concerns (see [28] for an overview). Future qualitative studies should explore whether GPs are aware of this fact, and inquire about their possible motivations for providing less space to migrant patients who are accompanied by an informal interpreter. In addition, comparing differences in GPs' responses in encounters with informal and professional interpreters could be interesting to study as well.

A noteworthy finding of this study is that in medical encounters with interpreters, 20% of all cues is being expressed by the interpreter, independent of the patient, corroborating the often-made observation that they do not function as an invisible, neutral conduit, but are active participants in triadic medical encounters [19,34]. The fact that interpreters in this study independently expressed worries they perceive the patient to have and, in some cases, exaggerated the intensity of patients' expressed cues, might imply that they sometimes take on an advocating role to ensure that the patient receives the care they need. At the same time though, a majority of responses from the interpreter toward patients' cues is a reducing space response, thereby inhibiting further exploration of patients' worries and concerns, possibly to save their own and/or the GPs' time. These contradictory

communicative acts seem to imply that interpreters frequently switch roles during medical encounters. Although the different and often conflicting roles of interpreters and their associated relational problems have been widely documented in the literature, most research has been based on professional interpreters [35]. Hence, more research is needed to establish the various roles informal interpreters perform during medical encounters and its implications for affective communication.

4.2. Study limitations and suggestions for further research

Our study consisted of a modest sample size and replications with bigger samples are advisable before more definite conclusions can be drawn about the influence of informal interpreters on the affective communication process in general practice. However, our sample size is comparable to those of other observational studies on interpreters in general practice (e.g. [19,31,35]). These studies either compared informal interpreters with professional ones [31], compared encounters with informal interpreters in which good versus poor mutual understanding was reached between patient and GP [36], or analyzed discourses between migrant patients, primary care physicians and informal interpreters [19]. Corresponding to the results of this study, results of these previous studies also indicate that informal interpreters regularly omit and revise linguistic features of the medical communication process [19,36], and that migrant patients express fewer emotions when an informal interpreter is present [31]. As there is a dearth of research investigating migrant patients' perspectives on informal interpreting, future research is needed to identify the feelings patients have toward informal interpreters and possible motives for not expressing emotions in their presence.

Another limitation of this study is that the two groups differed on educational level and gender distribution. The differences are due to the fact that Turkish migrant women have lower educational levels and, related, lower Dutch language proficiency than Turkish migrant men in the Netherlands [37]. Hence, they more often need to bring someone along to the medical encounter to help them communicate with their healthcare provider. As it is known from previous research that women are generally more emotionally expressive than men in medical visits (see [28] for an overview), it is all the more surprising that the results of this study show that the migrant patient group without the presence of an informal interpreter, which consisted of more men, uttered more cues and concerns than the group with informal interpreters, consisting predominantly of women. It would be interesting for future research to include male patients who take along informal interpreters to their GP and investigate whether the amount of cues/concerns they utter is lower compared to male migrant patients who visit their GP alone.

Last, due to the fact that this study made use of audiotapes, non-verbal indicators of negative feelings could not be investigated. As non-verbal cues might be more frequently displayed than verbal cues of emotions [28] and one's cultural background might influence non-verbal expressions of emotions [38], further research should include the use of videotapes to gain more insight into migrant patients' verbal and non-verbal expression of emotions in general practice and whether the presence of informal interpreters influences these expressions.

4.3. Practice implications

Awareness among GPs that the presence of an informal interpreter might reduce migrant patients' expression of emotions is of utmost importance. Therefore, GPs should be trained in communication strategies that enable active elicitation of migrant patients' emotions, in particular in encounters with informal interpreters.

4.4. Conclusion

Taking into account the limitations of this study and the need for further replication, at this point only tentative conclusions can be drawn. The results of this study do seem to suggest, though, that the presence of informal interpreters possibly inhibits the expression of emotions between migrant patients and their GP. Although the use of informal interpreters can have some advantages, in particular when they act as their patient's advocates, GPs should be alert to the possibility of missing crucial affective information, and call on the services of professional interpreters if necessary. To enable this, governmental funding of professional translation and interpreting services in health care is sorely needed.

Conflict of interest statement

None.

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